STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 127985

TO: Ben Sackey
Location: rem/5b31/5c18
Art Unit: 1626
Monday, July 26, 2004

Case Serial Number: 10/618044

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes

Ms. Jarrell

Access DB# 127989

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: BEN SACKEY Examiner #: 73489 Date: 7/20/04
Art Unit: 1626 Phone Number ~~30~~ 2-0704 Serial Number: 10/618,044
Mail Box and Bldg/Room Location: REM 5B21 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

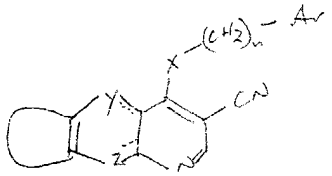
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Tricyclic Protein Kinase Inhibitors

Inventors (please provide full names): Dan M. Berger et al.

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

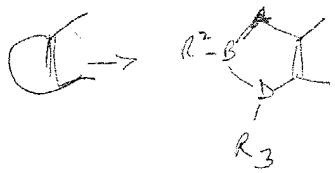


Elected species is
8-[4-chloro-5-methoxy-2-methylanilino]-3-[2-(4-morpholinyl)ethyl]-3H-imidazo[4,5-g]quinoline-7-carbonitrile

Ar is phenyl substituted

n is -0-

X is NH



A, D are N or A, B and D are N

****

STAFF USE ONLY	**Type of Search**		**Vendors and cost where applicable**	
Searcher: Noble	NA Sequence (#)		STN 639	
Searcher Phone #:	AA Sequence (#)		Dialog	
Searcher Location:	Structure (#)	2	Questel/Orbit	
Date Searcher Picked Up: 7/26/04	Bibliographic		Dr.Link	
Date Completed: 7/26/04	Litigation		Lexis/Nexis	
Searcher Prep & Review Time: 30	Fulltext		Sequence Systems	
Clerical Prep Time:	Patent Family		WWW/Internet	
Online Time: 30	Other		Other (specify)	

PTO-1590 (8-01)

=> d his

(FILE 'HOME' ENTERED AT 08:57:21 ON 26 JUL 2004)

FILE 'HCAPLUS' ENTERED AT 08:57:30 ON 26 JUL 2004
L1 1 US2004110762/PN

FILE 'REGISTRY' ENTERED AT 08:57:45 ON 26 JUL 2004

FILE 'HCAPLUS' ENTERED AT 08:57:50 ON 26 JUL 2004
L2 TRA L1 1- RN : 291 TERMS

FILE 'REGISTRY' ENTERED AT 08:57:51 ON 26 JUL 2004
L3 291 SEA L2

FILE 'REGISTRY' ENTERED AT 08:57:54 ON 26 JUL 2004

FILE 'HCAPLUS' ENTERED AT 08:57:56 ON 26 JUL 2004
L4 1 US2004110762/PN

=> b hcap
FILE 'HCAPLUS' ENTERED AT 08:58:19 ON 26 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 26 Jul 2004 VOL 141 ISS 5
FILE LAST UPDATED: 25 Jul 2004 (20040725/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

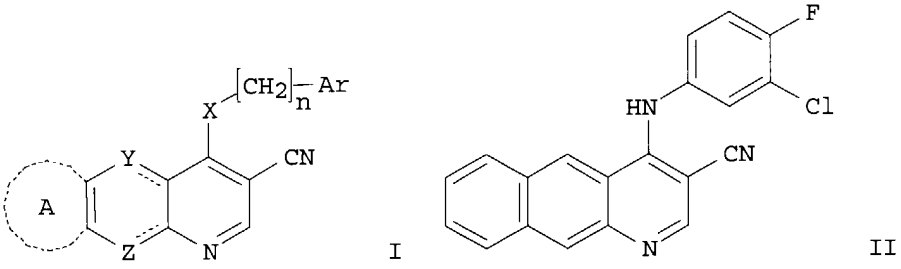
=> d all l1

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:906207 HCAPLUS
DN 136:37618
ED Entered STN: 16 Dec 2001
TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors
IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi
PA American Home Products Corporation, USA; Wyeth
SO U.S. Pat. Appl. Publ., 107 pp.
CODEN: USXXCO
DT Patent

LA English
IC ICM A61K031-5377
ICS A61K031-496; A61K031-4738; C07D491-02
NCL 514232800
CC 28-13 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001051620	A1	20011213	US 2000-751274	20001229
	US 6638929	B2	20031028		
	US 2004110762	**A1**	**20040610**	US 2003-618044	20030710 <--
PRAI	US 1999-240905P	P	19991229		
	US 2000-751274	A3	20001229		

OS MARPAT 136:37618
GI



AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 .mu.M against EGF-R kinase (recombinant enzyme), was given.

ST arom tricyclic compd prepn protein kinase inhibitor; EGF receptor kinase inhibitor arom tricyclic compd prepn; antitumor arom tricyclic compd prepn; KDR kinase inhibitor arom tricyclic compd prepn; mitogen activated protein kinase inhibitor arom tricyclic compd prepn; src kinase inhibitor arom tricyclic compd prepn

IT Antitumor agents
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT 79079-06-4, EGF receptor kinase 139691-76-2, Raf kinase 141349-89-5, Src kinase 142243-02-5, Mitogen activated protein kinase 150977-45-0
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT 263149-40-2P 348617-29-8P 348617-39-0P 348617-40-3P 348617-42-5P
348617-43-6P 348617-45-8P 348617-60-7P 348617-61-8P 348617-63-0P
348617-64-1P 348617-89-0P 348617-94-7P 348617-95-8P 348618-04-2P
348618-05-3P 348618-16-6P 348618-17-7P 348618-18-8P 348618-33-7P
348618-34-8P 348618-37-1P 348618-38-2P 348618-46-2P 348618-50-8P
348618-53-1P 348618-56-4P 348618-57-5P 348618-59-7P 348618-64-4P
348618-65-5P 348618-81-5P 348619-28-3P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT 348617-17-4P 348617-19-6P 348617-20-9P 348617-26-5P 348617-27-6P
348617-28-7P 348617-30-1P 348617-38-9P 348617-41-4P 348617-44-7P
348617-46-9P 348617-47-0P 348617-50-5P 348617-51-6P 348617-52-7P
348617-54-9P 348617-55-0P 348617-56-1P 348617-58-3P 348617-59-4P
348617-62-9P 348617-65-2P 348617-66-3P 348617-71-0P 348617-72-1P
348617-75-4P 348617-79-8P 348617-80-1P 348617-81-2P 348617-82-3P
348617-83-4P 348617-84-5P 348617-85-6P 348617-90-3P 348617-98-1P
348617-99-2P 348618-00-8P 348618-01-9P 348618-02-0P 348618-03-1P
348618-06-4P 348618-07-5P 348618-19-9P 348618-20-2P 348618-35-9P
348618-36-0P 348618-39-3P 348618-40-6P 348618-41-7P 348618-42-8P
348618-43-9P 348618-44-0P 348618-47-3P 348618-58-6P 348618-60-0P
348618-61-1P 348618-62-2P 348618-63-3P 348618-66-6P 348618-67-7P
348618-68-8P 348618-74-6P 348618-82-6P 348618-83-7P 348618-84-8P
348618-85-9P 348618-86-0P 348618-87-1P 348618-88-2P 348618-89-3P
348618-90-6P 348618-91-7P 348618-92-8P 348618-93-9P 348618-94-0P
348618-95-1P 348618-96-2P 348618-97-3P 348618-98-4P 348618-99-5P
348619-00-1P 348619-01-2P 348619-02-3P 348619-03-4P 348619-04-5P
348619-05-6P 348619-06-7P 348619-07-8P 348619-08-9P 348619-09-0P
348619-10-3P 348619-11-4P 348619-12-5P 348619-13-6P 348619-14-7P
348619-15-8P 348619-16-9P 348619-17-0P 348619-18-1P 348619-19-2P
348619-20-5P 348619-21-6P 348619-22-7P 348619-23-8P 348619-24-9P
348619-25-0P 348619-26-1P 348619-27-2P 348619-29-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT 79-10-7, Acrylic acid, reactions 90-05-1, Guaiacol 94-05-3, Ethyl (ethoxymethylene))cyanoacetate 105-34-0, Methyl cyanoacetate 108-01-0, 2-(Dimethylamino)ethanol 109-01-3, 1-Methylpiperazine 110-91-8, Morpholine, reactions 139-59-3, 4-Phenoxyaniline 288-36-8, 1H-1,2,3-Triazole 348-62-9, 4-Chloro-2-fluorophenol 367-21-5, 3-Chloro-4-fluoroaniline 504-88-1, 3-Nitropropionic acid 540-88-5, tert-Butyl acetate 554-00-7, 2,4-Dichloroaniline 591-19-5, 3-Bromoaniline 622-40-2, 4-(2-Hydroxyethyl)morpholine 632-02-0, 3-Chloropropyl p-toluenesulfonate 814-68-6, Acryloyl chloride 873-38-1, 2-Bromo-4-chloroaniline 882-33-7, Phenyl disulfide 1142-19-4, 4,4'-Dichlorodiphenyl disulfide 2038-03-1, 4-(2-Aminoethyl)morpholine 2835-95-2, 5-Amino-o-cresol 4637-24-5 5335-29-5, 3-Chloro-4-phenoxyaniline 5959-52-4, 3-Amino-2-naphthoic acid 20357-25-9, 6-Nitroveratraldehyde 24313-88-0, 3,4,5-Trimethoxyaniline 33693-48-0, 4-Benzyloxy-3-methoxybenzyl alcohol 34674-75-4 35212-85-2, Methyl 3-aminobenzo[b]thiophene-2-carboxylate 39786-35-1, Ethyl 3-amino-2-benzo[b]furancarboxylate 43073-44-5, 6,7-Dimethoxy-2,3-naphthalenedicarboxylic anhydride 50868-72-9, 5-Methoxy-2-methylaniline 57946-56-2, 4-Chloro-2-fluoroaniline 59404-86-3, 4-Benzyloxy-3-chloroaniline 59922-33-7 62492-42-6 63224-35-1 76513-69-4, 2-(Trimethylsilyl)ethoxymethyl chloride 76878-17-6 85006-21-9, 2-Chloro-5-methoxyaniline hydrochloride 98404-04-7, 2-Chloro-4-fluoro-5-methoxyaniline 98446-49-2, 2,4-Dichloro-5-methoxyaniline 131775-97-8 133088-44-5 133303-88-5 204915-71-9, 4-(2-Chloroethoxy)-3-methoxybenzaldehyde 348619-47-6
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT 3590-37-2P, Ethyl 3-nitropropionate 53544-07-3P 53815-60-4P
222622-96-0P 263149-39-9P 309269-57-6P 348617-15-2P 348617-16-3P
348617-21-0P 348617-22-1P 348617-23-2P 348617-24-3P 348617-25-4P
348617-31-2P 348617-32-3P 348617-33-4P 348617-34-5P 348617-35-6P
348617-36-7P 348617-37-8P 348617-48-1P 348617-49-2P 348617-57-2P
348617-67-4P 348617-68-5P 348617-69-6P 348617-70-9P 348617-73-2P
348617-74-3P 348617-76-5P 348617-77-6P 348617-78-7P 348617-86-7P
348617-87-8P 348617-88-9P 348617-91-4P 348617-92-5P 348617-93-6P
348617-96-9P 348617-97-0P 348618-08-6P 348618-09-7P 348618-10-0P
348618-11-1P 348618-12-2P 348618-13-3P 348618-14-4P 348618-15-5P
348618-21-3P 348618-22-4P 348618-23-5P 348618-24-6P 348618-25-7P
348618-26-8P 348618-27-9P 348618-28-0P 348618-29-1P 348618-30-4P
348618-31-5P 348618-32-6P 348618-45-1P 348618-48-4P 348618-49-5P
348618-51-9P 348618-52-0P 348618-54-2P 348618-55-3P 348618-69-9P
348618-70-2P 348618-71-3P 348618-72-4P 348618-73-5P 348618-75-7P
348618-76-8P 348618-77-9P 348618-78-0P 348618-79-1P 348618-80-4P
348619-30-7P 348619-31-8P 348619-32-9P 348619-33-0P 348619-34-1P
348619-35-2P 348619-36-3P 348619-37-4P 348619-38-5P 348619-39-6P
348619-40-9P 348619-41-0P 348619-42-1P 348619-43-2P 348619-44-3P
348619-45-4P 348619-46-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

=> b wpix
FILE 'WPIX' ENTERED AT 08:58:26 ON 26 JUL 2004
COPYRIGHT (C) 2004 THOMSON DERWENT

FILE LAST UPDATED: 23 JUL 2004 <20040723/UP>
MOST RECENT DERWENT UPDATE: 200447 <200447/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://thomsonderwent.com/coverage/latestupdates/ <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES, PLEASE VISIT:
http://thomsonderwent.com/support/userguides/ <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX FIRST VIEW - FILE WPIFV.
FOR FURTHER DETAILS: http://www.thomsonderwent.com/dwpifv <<<

>>> THE DISPLAY LAYOUT HAS BEEN CHANGED TO ACCOMODATE THE NEW FORMAT GERMAN PATENT APPLICATION AND PUBLICATION NUMBERS. SEE ALSO:
http://www.stn-international.de/archive/stnews/news0104.pdf <<<

>>> THE SDIS FOR UPDATE 46 EMPLOYING UP AS THE UPDATE CODE MAY

CONTAIN DOCUMENTS ALREADY DISTRIBUTED WITH RUN 45. IF YOU ENCOUNTER SURPLUS DOCUMENTS, PLEASE APPROACH OUR HELPDESKS TO HAVE THESE CREDITED.
WE APOLOGIZE FOR ANY INCONVENIENCE CAUSED. <<<

=> d all l4

L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-522007 [57] WPIX
DNC C2001-155768
TI New tricyclic heterocycles are protein kinase inhibitors, useful in the treatment, inhibition and eradication of neoplasms, polycystic kidney disease and colonic polyps.
DC B02
IN BERGER, D M; BOSCHELLI, D H; DEMORIN, F F; DUTIA, M D; POWELL, D W; TSOU, H; WISSNER, A; WU, B; YE, F; ZHANG, N
PA (AMHP) AMERICAN HOME PROD CORP; (AMHP) WYETH; (AMHP) WYETH INC
CYC 95
PI WO 2001047892 A1 20010705 (200157)* EN 377 C07D215-54
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001024646 A 20010709 (200164) C07D215-54
US 2001051620 A1 20011213 (200204)# A61K031-5377
EP 1242382 A1 20020925 (200271) EN C07D215-54
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
BR 2000016878 A 20021008 (200277) C07D215-54
JP 2003519127 W 20030617 (200349) 341 C07D221-08
US 6638929 B2 20031028 (200372)# A61K031-535
CN 1437584 A 20030820 (200374) C07D215-54
US 2004110762 A1 20040610 (200438)# A61K031-506 <--
ADT WO 2001047892 A1 WO 2000-US35616 20001229; AU 2001024646 A AU 2001-24646 20001229; US 2001051620 A1 Provisional US 1999-240905P 19991229, US 2000-751274 20001229; EP 1242382 A1 EP 2000-988437 20001229, WO 2000-US35616 20001229; BR 2000016878 A BR 2000-16878 20001229, WO 2000-US35616 20001229; JP 2003519127 W WO 2000-US35616 20001229, JP 2001-549364 20001229; US 6638929 B2 Provisional US 1999-240905P 19991229, US 2000-751274 20001229; CN 1437584 A CN 2000-819209 20001229; US 2004110762 A1 Provisional US 1999-240905P 19991229, Div ex US 2000-751274 20001229, US 2003-618044 20030710
FDT AU 2001024646 A Based on WO 2001047892; EP 1242382 A1 Based on WO 2001047892; BR 2000016878 A Based on WO 2001047892; JP 2003519127 W Based on WO 2001047892; US 2004110762 A1 Div ex US 6638929
PRAI US 1999-473600 19991229; US 2000-751274 20001229; US 2003-618044 20030710
IC ICM A61K031-506; A61K031-535; A61K031-5377; C07D215-54; C07D221-08
ICS A61K031-429; A61K031-435; A61K031-4353; A61K031-4355; A61K031-4365; A61K031-4375; A61K031-473; A61K031-4738; A61K031-4745; A61K031-496; A61K031-498; A61K031-4985; A61P001-00; A61P003-10; A61P005-14; A61P009-00; A61P009-10; A61P011-00; A61P013-12; A61P017-00; A61P017-06; A61P017-14; A61P019-02; A61P025-00; A61P029-00; A61P031-04; A61P031-12; A61P035-00; A61P037-06; A61P037-08; A61P043-00; C07C205-59; C07C229-70; C07D279-12; C07D307-85; C07D333-70; C07D401-10; C07D401-12; C07D401-14; C07D471-02; C07D471-04; C07D487-02; C07D491-02; C07D491-04; C07D491-048; C07D495-04; C07D513-04

AB WO 200147892 A UPAB: 20011005
NOVELTY - Tricyclic heterocycles (I) are new.
DETAILED DESCRIPTION - Tricyclic heterocycles of formula (I) and their salts are new.
ring system = fused 5,6,6-tricycle, 6,6,6-tricycle, 6,5,6-tricycle, or 6,6,6-tricycle;
Ar = 3-7C cycloalkyl (optionally substituted by 1 or more 1-6C alkyl), or pyridinyl, pyrimidinyl or phenyl (all optionally substituted), 8-12 membered bicyclic aryl or bicyclic heteroaryl containing 1-4 N, O or S (both optionally substituted), or -A'-T-L;
A' = pyridinyl, pyrimidinyl or phenyl (all optionally substituted);
T = -NH(CH2)m-, -O(CH2)m-, -S(CH2)m-, -NR(CH2)m-, -(CH2)m-, -(CH2)mNH-, -(CH2)mO-, -(CH2)mS-, -SO(CH2)m-, SO2(CH2)m-, -CO(CH2)m-, -(CH2)mCO-, -(CH2)mSO-, -(CH2)mSO2- or -(CH2)mNR-;
L = phenyl (optionally substituted), or 5-6 membered heteroaryl ring containing 1-3 N, O or S and optionally substituted;
m = 0-3;
n = 0-1;
X = NH, O, S or NR;
R = 1-6C alkyl;
Y, Z = C or N; or
Y = N, O or S; and
Z = bond; or
Y = bond; and
Z = N, O or S;
ring A = a group of formula (a)-(l);
B = C or N;
D, E = C, N, O or S;
dotted line = optional double bond;
R1-R4 = absent, H, OH, halo, amino, hydroxyamino, CF3, CF3O, SH, 1-6C alkyl, 3-8C cycloalkyl, 2-6C alkenyl, 2-6C alkynyl, 2-6C alkenyloxy, 2-6C alkynyloxy, 1-6C hydroxyalkyl, 1-6C mercaptoalkyl, halomethyl, 2-7C alkoxymethyl, 1-6C alkoxy, 3-8C cycloalkoxy, 1-6C alkylthio, 3-8C cycloalkylthio, 1-6C alkylsulfinyl, 1-6C alkylsulfonyl, 1-6C alkylsulfonamido, 2-6C alkenylsulfonamido, 2-6C alkynylsulfonamido, CN, NO2, carboxy, 2-7C alkoxycarbonyl, 2-7C alkanoyl, 3-7C alkenoyl, 4-12C N-alkyl-N-alkenylamino, 6-12C dialkenylamino, phenylamino, benzylamino, phenoxy, phenyl, thiophenoxy, benzyl, 1-6C alkylamino, 2-7C alkanoyloxy, 3-8C alkenoyloxy, 3-8C alkynoyloxy, carbamoyl, 2-7C N-alkylcarbamoyl, 3-13C N,N-dialkylcarbamoyl, 2-12C dialkylamino, 2-7C alkanoyloxymethyl, 2-7C alkenoyloxymethyl, 2-7C alkynoyloxymethyl, azido, benzoyl, 2-7C carboxyalkyl, 3-8C carboxyalkoxyalkyl, R8R9-CH-M-(C(R6)2)k-X-, R7-(C(R6)2)g-X-, R7-(C(R6)2)p-M-(C(R6)2)k-X-, Het-(C(R6)2)q-W-(C(R6)2)k-X-, Ph-(C(R6)2)q-W-(C(R6)2)k-X-, R5-CONH(CH2)q-, R5-C equivalent to C-CONH(CH2)q-, (R5)2C=C(CN)(CH2)q-, (R5)2C=C(R5)CONH(CH2)q-, (R5)2C=C(R5)SO2NH(CH2)q-, R5OC(O)NH(CH2)q-, R5NHC(O)NH(CH2)q-, (R5)2NC(O)NH(CH2)q-, R5HNC(O)O(CH2)q, R5HNC(S)NH(CH2)q-, (R5)2NC(S)NH(CH2)q-, (R5)2NC(O)O(CH2)q-, or a group of formula (m) or (n);
R5 = H, 1-6C alkyl, 1-6C aminoalkyl, 2-9C N-alkylaminoalkyl, 3-12C N,N-dialkylaminoalkyl, 4-12C N-cycloalkylaminoalkyl, 5-18C N-cycloalkyl-N-alkylaminoalkyl, 7-18C N,N-dicycloalkylaminoalkyl, morpholino-N-(1-6C alkyl), piperidino-N-(1-6C alkyl), N-(1-6C alkyl)-piperazino-N-(1-6C alkyl), 3-11C azacycloalkyl-N-alkyl, 1-6C hydroxyalkyl, 2-8C alkoxyalkyl or phenyl;
X = (CH2)m, O, S or NR6;
R7 = N(R6)2, OR6, J, N(R6)3+ or NR6(OR6);
M = NR6, O, S, N-((C(R6)2)pN(R6)2) or N-((C(R6)2)p-OR6);
W = NR6, O, S or bond;
Het = morpholine, thiomorpholine, thiomorpholine-S-oxide, thiomorpholine-S,S-dioxide, piperidine, pyrrolidine, aziridine, pyridine,

imidazole, 1,2,3-triazole, 1,2,4-triazole, thiazole, thiazolidine, tetrazole, piperazine, furan, thiophene, tetrahydrothiophene, tetrahydrofuran, dioxane, 1,3-dioxolane pyrrole or tetrahydropyran (all optionally C-substituted, and optionally N-substituted by 1-2 NR6);

Ph = optionally substituted phenyl;

R6 = H, 1-6C alkyl, 2-6C alkenyl, 2-6C alkynyl, 1-6C cycloalkyl, 2-7C alkanoyl, 2-7C carbamoylalkyl, 1-6C hydroxyalkyl, 3-6C hydroxycycloalkyl or 2-7C carboxyalkyl, or optionally substituted phenyl;

R8, R9 = N-((C(R6)2)pN(R6)2) or N-((C(R6)2)p-OR6);

J = H, Cl, F or Br;

g = 1-6;
k = 0-4;
p = 2-4;
q = 0-4;
r = 1-4; and
s = 1-6;
provided that:

(1) when ring A = group (1), at least 1 bond between E and B or B and D is a double bond; at least 1 of E, B or D is not C; only 1 of E, B or D = O or S; and the adjacent atoms to O or S are C;

(2) when R5 is bound to an N atom, the resulting structures are not N-C-N or O-C-N radicals; and when R5 is bound to an O atom, the resulting structure is not a -N-C-O- radical;

(3) when R6 = 2-7C alkenyl or 2-7C alkynyl, the alkenyl and alkynyl moieties are bound to N or O through a saturated C atom in the alkenyl or alkynyl chain;

(4) when X = NR6 and R7 = N(R6)2, N(R6)3+ or NR6(OR6), then g = 2-6;

(5) when M = O or S and R7 = OR6, then p = 1-4;

(6) when X = NR6, O or S, then k = 2-4;

(7) when X = O or S and M or W = O or S, then k = 1-4;

(8) when W is not a bond with Het bonded through an N atom, then q = 2-4; and

(9) when W = bond with Het bonded through an N atom and X = NR6, O or S, then k = 2-4.

An INDEPENDENT CLAIM is also included for the preparation of (I) via 14 different reaction pathways.

ACTIVITY - Cytostatic; Nephrotropic; Gastrointestinal; Hepatotropic; Dermatological.

MECHANISM OF ACTION - MAPK kinase inhibitor; RAF kinase inhibitor; SRC kinase inhibitor; ECK/LERK-1 kinase inhibitor; VEGF/KDR kinase inhibitor

In an assay to measure inhibition of cancer cell growth (see Skehan et. al., J. Natl. Canc. Inst., 82,1107-1112 (1990)), 4-(2,4-dichloroanilino)-8-nitro(1)benzothieno(3,2-b)pyridine-3-carbonitrile (Ib) displayed IC50 values of 0.46, 0.41, 0.59 and 0.67 micro g/ml against MDA-MB-435, A431, SK-BR3 and SW620 cell lines respectively.

USE - Compounds (I) are useful for treating, eradicating or inhibiting the growth of neoplasms,especially breast, kidney, bladder, mouth, larynx, esophagus, stomach, colon, ovary, lung, pancreas, liver, prostate and skin, and especially neoplasms that express EGFR or erbB2 (Her2). (I) are also useful in treating, eradicating or inhibiting polycystic kidney disease and colonic polyps, and for inhibiting the biological effects of a deregulated protein kinase (all claimed).

Dwg.0/0

FS CPI
FA AB; GI; DCN
MC CPI: B05-B01B; B06-H; B10-B01A; B10-B02A; B10-G02; B14-D06; B14-H01B; B14-N10

```
=> b home
FILE 'HOME' ENTERED AT 08:58:36 ON 26 JUL 2004

=>
```

=> b reg
FILE 'REGISTRY' ENTERED AT 10:03:41 ON 26 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 23 JUL 2004 HIGHEST RN 715654-51-6
DICTIONARY FILE UPDATES: 23 JUL 2004 HIGHEST RN 715654-51-6

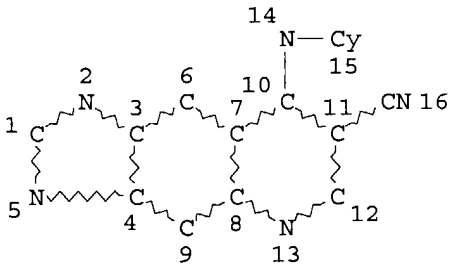
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que stat l9
L7 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 16

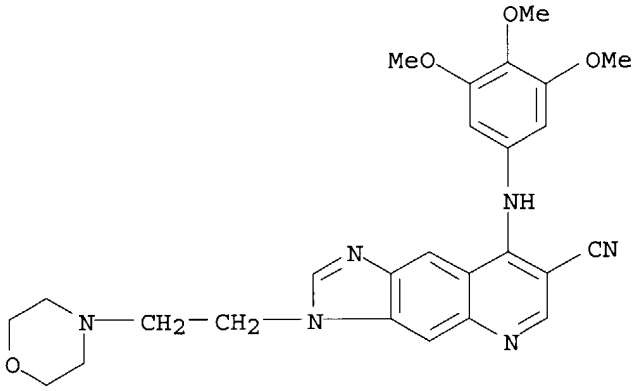
STEREO ATTRIBUTES: NONE
L9 20 SEA FILE=REGISTRY [illegible] L7

100.0% PROCESSED 501 ITERATIONS 20 ANSWERS
SEARCH TIME: 00.00.01

=> [illegible] l9 tot

L9 ANSWER 1 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500023-80-3 REGISTRY
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 3-[2-(4-morpholinyl)ethyl]-8-
[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)

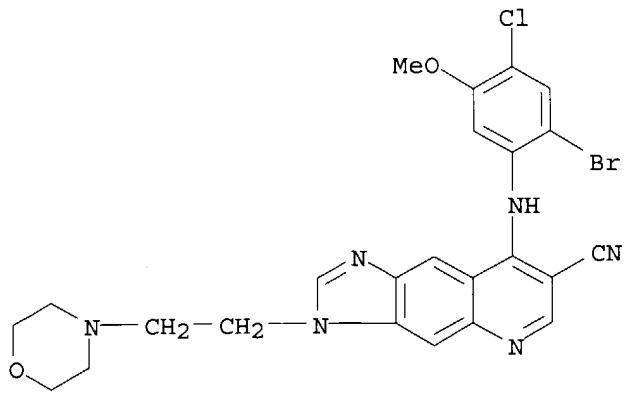
FS 3D CONCORD
MF C26 H28 N6 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

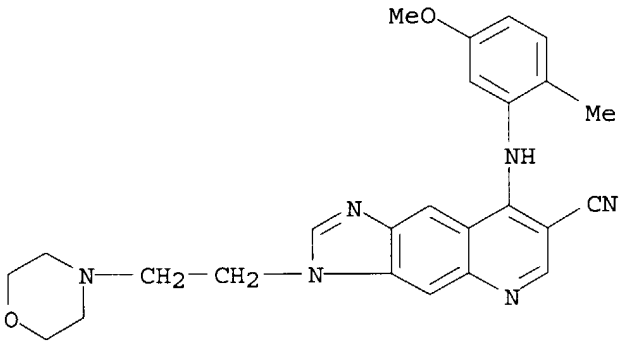
L9 ANSWER 2 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500023-79-0 REGISTRY
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chloro-5-methoxyphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C24 H22 Br Cl N6 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

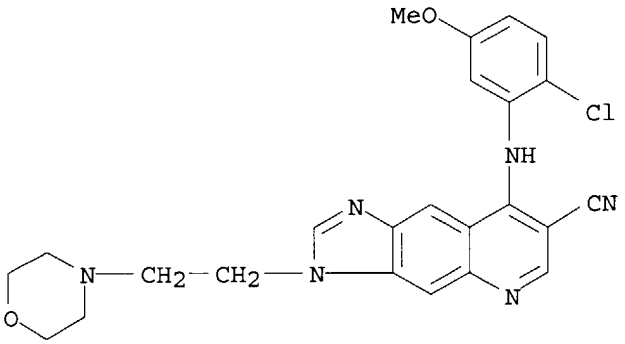
L9 ANSWER 3 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500023-78-9 REGISTRY
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(5-methoxy-2-methylphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C25 H26 N6 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

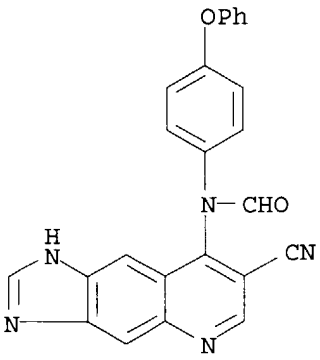
L9 ANSWER 4 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 500023-77-8 REGISTRY
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-chloro-5-methoxyphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C24 H23 Cl N6 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 5 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348619-42-1 REGISTRY
CN Formamide, N-(7-cyano-1H-imidazo[4,5-g]quinolin-8-yl)-N-(4-phenoxyphenyl)-(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C24 H15 N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

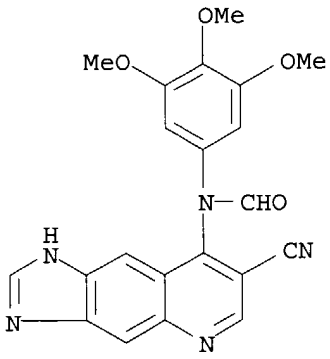


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 6 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348619-39-6 REGISTRY
CN Formamide, N-(7-cyano-1H-imidazo[4,5-g]quinolin-8-yl)-N-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C21 H17 N5 O4

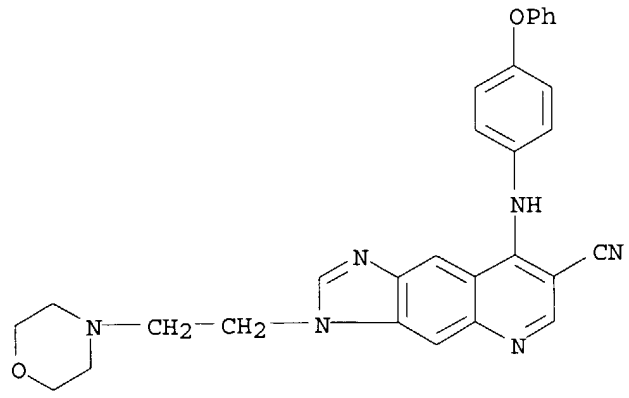
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 7 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-72-1 REGISTRY
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 3-[2-(4-morpholinyl)ethyl]-8-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C29 H26 N6 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



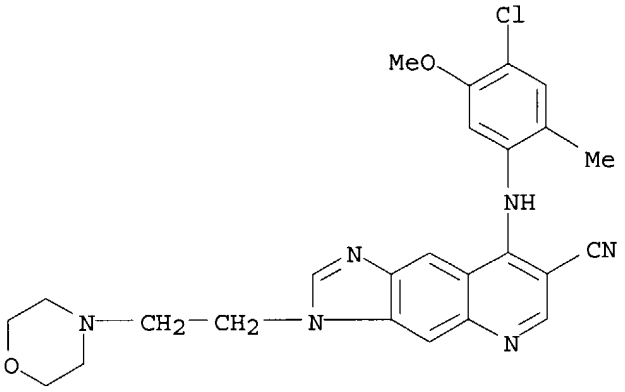
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)

Searched by Noble Jarrell

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

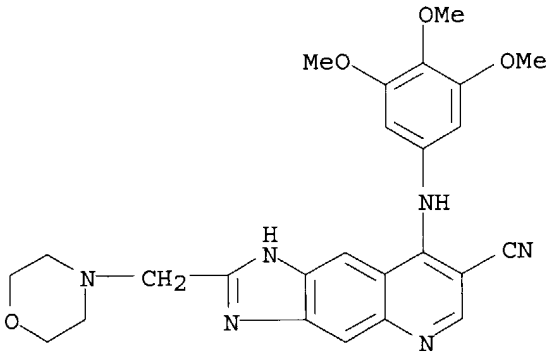
L9 ANSWER 8 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-71-0 REGISTRY
CN 3H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-chloro-5-methoxy-2-methylphenyl)amino]-3-[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C25 H25 Cl N6 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

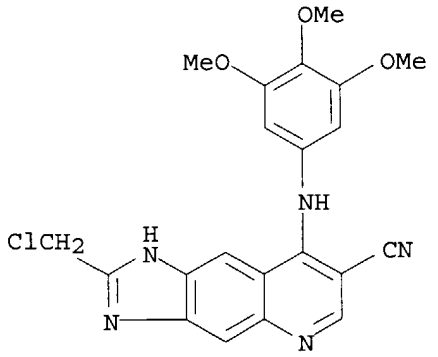
L9 ANSWER 9 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-62-9 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(4-morpholinylmethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
DR 500023-76-7
MF C25 H26 N6 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 10 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-61-8 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-(chloromethyl)-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C21 H18 Cl N5 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

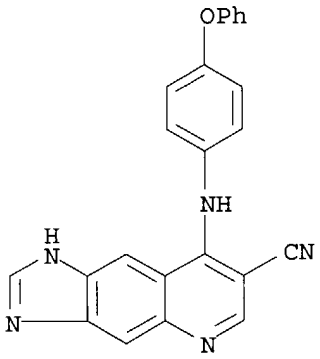


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 11 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-58-3 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(4-phenoxyphenyl)amino]-

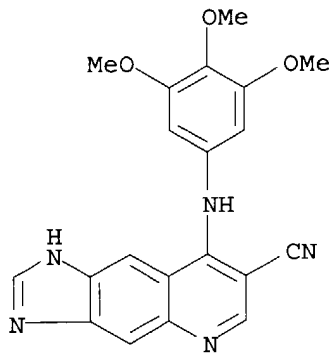
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C23 H15 N5 O
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

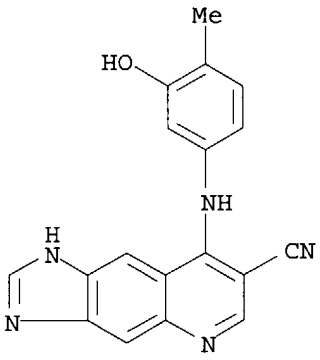
L9 ANSWER 12 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-56-1 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C20 H17 N5 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

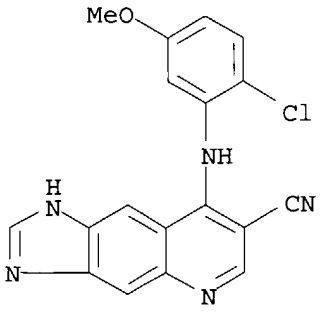
L9 ANSWER 13 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-55-0 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3-hydroxy-4-methylphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C18 H13 N5 O
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

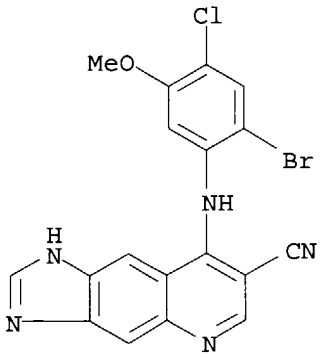
L9 ANSWER 14 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-54-9 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C18 H12 Cl N5 O
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 15 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-52-7 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chloro-5-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C18 H11 Br Cl N5 O
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

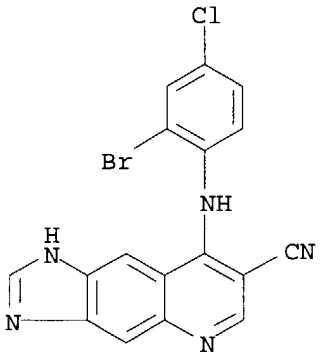


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 16 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-51-6 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(2-bromo-4-chlorophenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD

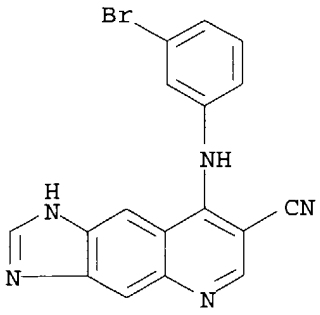
MF C17 H9 Br Cl N5
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 17 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-50-5 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(3-bromophenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C17 H10 Br N5
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

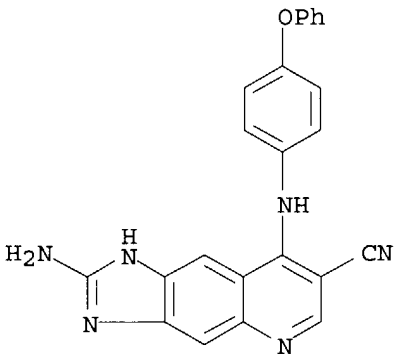


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

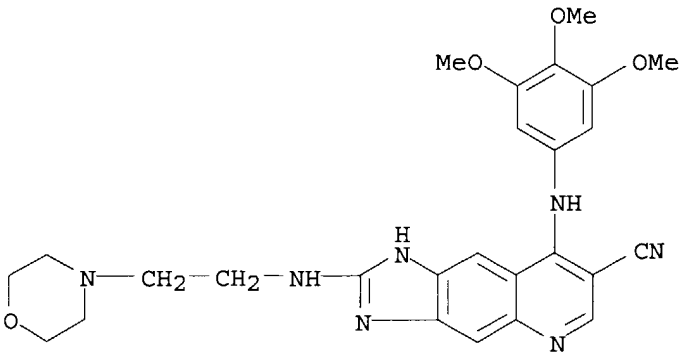
L9 ANSWER 18 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-47-0 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-amino-8-[(4-phenoxyphenyl)amino]-, monohydrochloride (9CI) (CA INDEX NAME)
MF C23 H16 N6 O . Cl H
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



● HCl

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

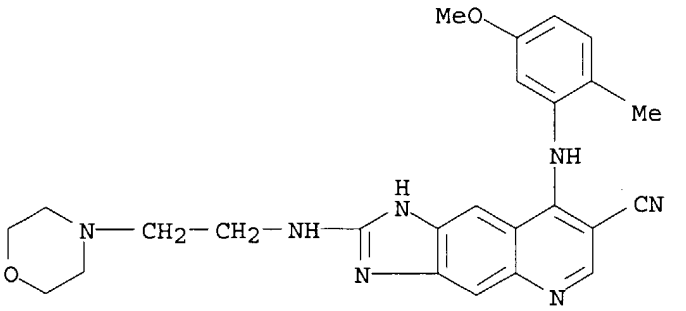
L9 ANSWER 19 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-46-9 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 2-[[2-(4-morpholinyl)ethyl]amino]-8-[(3,4,5-trimethoxyphenyl)amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C26 H29 N7 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 20 OF 20 REGISTRY COPYRIGHT 2004 ACS on STN
RN 348617-44-7 REGISTRY
CN 1H-Imidazo[4,5-g]quinoline-7-carbonitrile, 8-[(5-methoxy-2-methylphenyl)amino]-2-[[2-(4-morpholinyl)ethyl]amino]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C25 H27 N7 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his

(FILE 'HOME' ENTERED AT 08:57:21 ON 26 JUL 2004)

```
     FILE 'HCAPLUS' ENTERED AT 08:57:30 ON 26 JUL 2004
L1             1 US2004110762/PN

     FILE 'REGISTRY' ENTERED AT 08:57:45 ON 26 JUL 2004

     FILE 'HCAPLUS' ENTERED AT 08:57:50 ON 26 JUL 2004
L2               TRA L1 1- RN :      291 TERMS

     FILE 'REGISTRY' ENTERED AT 08:57:51 ON 26 JUL 2004
L3           291 SEA L2

     FILE 'REGISTRY' ENTERED AT 08:57:54 ON 26 JUL 2004

     FILE 'WPIX' ENTERED AT 08:57:56 ON 26 JUL 2004
L4             1 US2004110762/PN

     FILE 'REGISTRY' ENTERED AT 09:34:05 ON 26 JUL 2004
L5               STR
L6             1 L5
L7               STR L5
L8             1 L7
L9            20 L7 FULL
                 SAVE TEMP L9 SAC044FUL/A
L10           63 C25H25CLN6O2
L11            1 L10 AND L9

     FILE 'HCAPLUS' ENTERED AT 09:45:05 ON 26 JUL 2004
L12            3 L9

     FILE 'STNGUIDE' ENTERED AT 09:45:25 ON 26 JUL 2004

     FILE 'HCAPLUS' ENTERED AT 09:46:32 ON 26 JUL 2004
L13            2 L12 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)

     FILE 'USPATFULL, USPAT2' ENTERED AT 09:47:02 ON 26 JUL 2004
L14            3 L9
L15            3 L14 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)

     FILE 'HCAOLD' ENTERED AT 09:47:54 ON 26 JUL 2004
L16            0 L9

     FILE 'BEILSTEIN' ENTERED AT 09:48:03 ON 26 JUL 2004
L17           13 L7 FULL

     FILE 'MARPAT' ENTERED AT 09:48:44 ON 26 JUL 2004
L18              STR L7
L19            0 L18
L20            2 L18 FULL

     FILE 'HCAPLUS' ENTERED AT 09:50:50 ON 26 JUL 2004
L21            3 L11
L22            2 L21 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)

     FILE 'USPATFULL, USPAT2' ENTERED AT 09:51:12 ON 26 JUL 2004
L23            3 L11
L24            3 L23 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)

     FILE 'HCAOLD' ENTERED AT 09:51:49 ON 26 JUL 2004
L25            0 L11
```

FILE 'HCAPLUS' ENTERED AT 09:52:18 ON 26 JUL 2004
L26 2 L13 OR L22

FILE 'USPATFULL, USPAT2' ENTERED AT 09:52:38 ON 26 JUL 2004
L27 3 L15 OR L24

FILE 'BEILSTEIN' ENTERED AT 09:59:59 ON 26 JUL 2004
L28 0 L17 AND RN/FA

=> b hcap
FILE 'HCAPLUS' ENTERED AT 10:05:07 ON 26 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 26 Jul 2004 VOL 141 ISS 5
FILE LAST UPDATED: 25 Jul 2004 (20040725/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

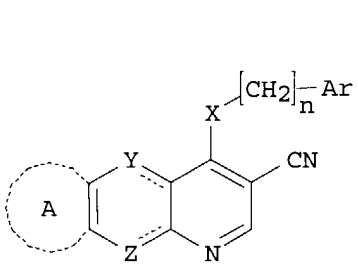
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d bib abs hitrn l26 tot

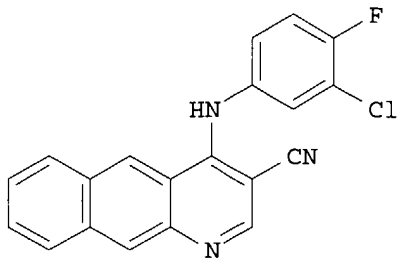
L26 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:906207 HCAPLUS
DN 136:37618
TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors
IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi
PA American Home Products Corporation, USA; Wyeth
SO U.S. Pat. Appl. Publ., 107 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 2001051620	A1	20011213		US 2000-751274	20001229	<--
	US 6638929	B2	20031028				
	US 2004110762	A1	20040610		US 2003-618044	20030710	<--
PRAI	US 1999-240905P	P	19991229	<--			
	US 2000-751274	A3	20001229				

OS MARPAT 136:37618
GI



I



II

AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 .mu.M against EGF-R kinase (recombinant enzyme), was given.

IT **348617-61-8P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT **348617-44-7P 348617-46-9P 348617-47-0P**
348617-50-5P 348617-51-6P 348617-52-7P
348617-54-9P 348617-55-0P 348617-56-1P
348617-58-3P 348617-62-9P 348617-71-0P
348617-72-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

IT **348619-39-6P 348619-42-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

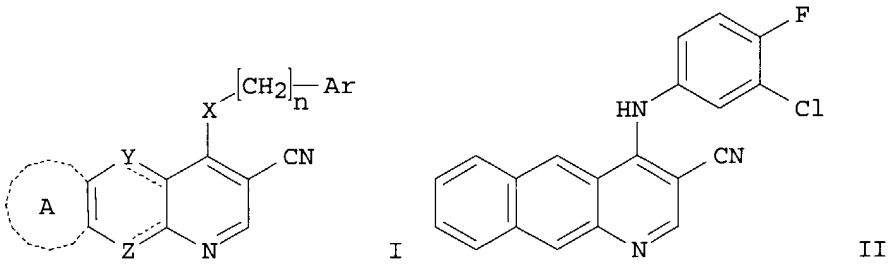
L26 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:489374 HCAPLUS
DN 135:92639
TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors
IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi
PA American Home Products Corp., USA
SO PCT Int. Appl., 377 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001047892	A1	20010705	WO 2000-US35616	20001229 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1242382	A1	20020925	EP 2000-988437	20001229 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2000016878	A	20021008	BR 2000-16878	20001229 <--
	JP 2003519127	T2	20030617	JP 2001-549364	20001229 <--
PRAI	US 1999-473600	A	19991229 <--		
	WO 2000-US35616	W	20001229		

OS MARPAT 135:92639

GI



AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 .mu.M against EGF-R kinase (recombinant enzyme), was given.

IT **348617-61-8P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile rings as protein kinase inhibitors)

IT **348617-44-7P 348617-46-9P 348617-47-0P 348617-50-5P 348617-51-6P 348617-52-7P 348617-54-9P 348617-55-0P 348617-56-1P 348617-58-3P 348617-62-9P 348617-71-0P 348617-72-1P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile

rings as protein kinase inhibitors)
IT **348619-39-6P 348619-42-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> b uspatall
FILE 'USPATFULL' ENTERED AT 10:05:40 ON 26 JUL 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'HCAPLUS' ENTERED AT 10:05:40 ON 26 JUL 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs hitrn l27 tot

L27 ANSWER 1 OF 3 USPATFULL on STN
AN 2004:145089 USPATFULL
TI Tricyclic protein kinase inhibitors
IN Berger, Dan M., New City, NY, UNITED STATES
Dutia, Minu D., West Nyack, NY, UNITED STATES
DeMorin, Frenel F., Nanuet, NY, UNITED STATES
Boschelli, Diane H., New City, NY, UNITED STATES
Powell, Dennis W., Westchester, NY, UNITED STATES
Tsou, Hwei-Ru, New City, NY, UNITED STATES
Wissner, Allan, Ardsley, NY, UNITED STATES
Zhang, Nan, Eastchester, NY, UNITED STATES
Ye, Fei, Nanuet, NY, UNITED STATES
Wu, Biqi, Nanuet, NY, UNITED STATES
PA WYETH, Madison, NJ (U.S. corporation)
PI US 2004110762 A1 20040610
AI US 2003-618044 A1 20030710 (10)
RLI Division of Ser. No. US 2000-751274, filed on 29 Dec 2000, GRANTED, Pat. No. US 6638929
PRAI US 1999-240905P 19991229 (60) <--
DT Utility
FS APPLICATION
LREP Anne M. Rosenblum, Esq., Suite 212, 163 Delaware Avenue, Delmar, NY, 12054
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 8418
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides compounds of formula 1, having the structure
##STR1##

which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **348617-61-8P**
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT **348617-44-7P 348617-46-9P 348617-47-0P**

348617-50-5P 348617-51-6P 348617-52-7P
348617-54-9P 348617-55-0P 348617-56-1P
348617-58-3P 348617-62-9P 348617-71-0P
348617-72-1P
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT **348619-39-6P 348619-42-1P**
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

L27 ANSWER 2 OF 3 USPATFULL on STN
AN 2001:229667 USPATFULL
TI Tricyclic protein kinase inhibitors
IN Berger, Dan M., New City, NY, United States
Dutia, Minu D., West Nyack, NY, United States
DeMorin, Frenel F., Nanuet, NY, United States
Boschelli, Diane H., New City, NY, United States
Powell, Dennis W., Westchester, NY, United States
Tsou, Hwei-Ru, New City, NY, United States
Wissner, Allan, Ardsley, NY, United States
Zhang, Nan, Eastchester, NY, United States
Ye, Fei, Nanuet, NY, United States
Wu, Biqi, Nanuet, NY, United States
PA American Home Products Corporation, Madison, NJ, United States, 07940-0874 (U.S. corporation)
PI US 2001051620 A1 20011213
US 6638929 B2 20031028
AI US 2000-751274 A1 20001229 (9)
PRAI US 1999-240905P 19991229 (60) <--
DT Utility
FS APPLICATION
LREP AMERICAN HOME PRODUCTS CORPORATION, PATENT SECTION, FIVE GIRALDA FARMS, MADISON, NJ, 07940-0874
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 8432
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides compounds of formula 1, having the structure
##STR1##

which are useful as inhibitors of protein tyro sine kinase and are antiproliferative agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **348617-61-8P**
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT **348617-44-7P 348617-46-9P 348617-47-0P**
348617-50-5P 348617-51-6P 348617-52-7P
348617-54-9P 348617-55-0P 348617-56-1P
348617-58-3P 348617-62-9P 348617-71-0P
348617-72-1P
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT **348619-39-6P 348619-42-1P**

(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

L27 ANSWER 3 OF 3 USPAT2 on STN
AN 2001:229667 USPAT2
TI Tricyclic protein kinase inhibitors
IN Berger, Dan M., New City, NY, United States
Dutia, Minu D., West Nyack, NY, United States
DeMorin, Frenel F., Nanuet, NY, United States
Boschelli, Diane H., New City, NY, United States
Powell, Dennis W., Westchester, NY, United States
Tsou, Hwei-Ru, New City, NY, United States
Wissner, Allan, Ardsley, NY, United States
Zhang, Nan, Eastchester, NY, United States
Ye, Fei, Nanuet, NY, United States
Wu, Biqi, Nanuet, NY, United States
PA Wyeth, Madison, NJ, United States (U.S. corporation)
PI US 6638929 B2 20031028
AI US 2000-751274 20001229 (9)
PRAI US 1999-240905P 19991229 (60) <--
DT Utility
FS GRANTED
EXNAM Primary Examiner: Solola, Taopiq; Assistant Examiner: Sackey, Ebenezer
LREP Hogan, Jr., John W.
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 7552
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides compounds of formula 1, having the structure
##STR1##

which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **348617-61-8P**
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT **348617-44-7P 348617-46-9P 348617-47-0P**
348617-50-5P 348617-51-6P 348617-52-7P
348617-54-9P 348617-55-0P 348617-56-1P
348617-58-3P 348617-62-9P 348617-71-0P
348617-72-1P
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)
IT **348619-39-6P 348619-42-1P**
(preparation of substituted aromatic tricyclic compds. containing nicotinonitrile
rings as protein kinase inhibitors)

=> b beilstein
FILE 'BEILSTEIN' ENTERED AT 10:06:13 ON 26 JUL 2004
COPYRIGHT (c) 2004 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften
licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE RELOADED ON OCTOBER 20, 2002
FILE LAST UPDATED ON JUNE 15, 2004

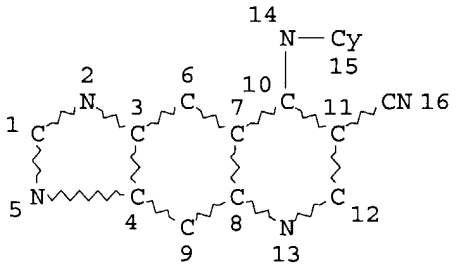
FILE COVERS 1771 TO 2003.
*** FILE CONTAINS 8,997,153 SUBSTANCES ***

>>> PLEASE NOTE: Reaction data and substance data are stored in separate documents and can not be searched together in one query.
Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a molecular formula or a structure search for example can be restricted to compounds with available reaction information by concatenation with PRE/FA, REA/FA or more general with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be selected from substance answer sets and searched in the next step as reaction partner BRNs - Reactant (RX.RBRN) or Product BRN (RX.PBRN). After a search for reaction details substance documents associated with reactants or products may be retrieved by searching RX.PBRNs or RX.RBRNs as BRNs. <<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

****
* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *
****

=> d que stat 117
L7 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 16

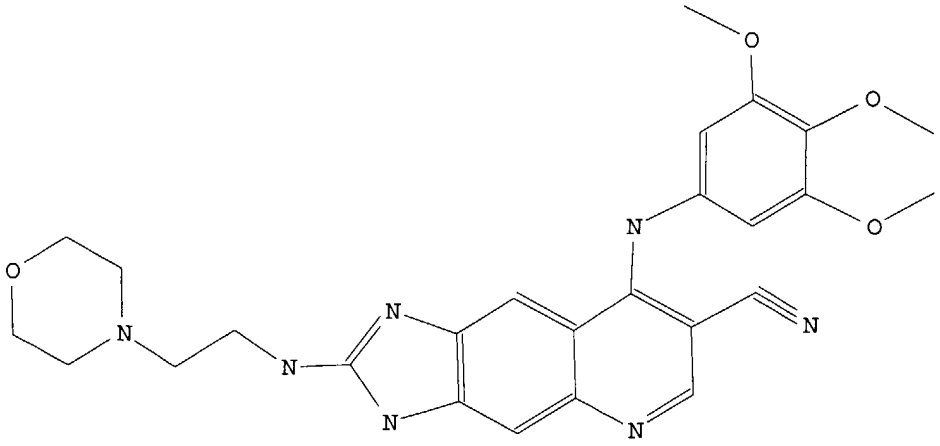
STEREO ATTRIBUTES: NONE
L17 13 SEA FILE=BEILSTEIN SSS FUL L7

100.0% PROCESSED 22 ITERATIONS 13 ANSWERS
SEARCH TIME: 00.00.03

=> d che ide rx l17 tob

L17 ANSWER 1 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN):	9306940
Chemical Name (CN):	2-(2-morpholin-4-yl-ethylamino)-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN):	2-(2-morpholin-4-yl-ethylamino)-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF):	C26 H29 N7 O4
Molecular Weight (MW):	503.56
Lawson Number (LN):	30824, 30356, 15326, 3018, 289
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	7859336
Tautomer ID (TAUTID):	8735609
Entry Date (DED):	2003/04/17
Update Date (DUPD):	2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	5
FS	File Segment	1

CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID):	9182059
Reactant BRN (.RBRN):	9294295, 1210530
Reactant (.RCT):	6,7-diamino-4-(3,4,5-trimethoxy-phenylamino)-quinoline-3-carbonitrile, 4-(2-isothiocyanato-ethyl)-morpholine
Product BRN (.PBRN):	9306940
Product (.PRO):	2-(2-morpholin-4-yl-ethylamino)-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

Reaction Details:
RX

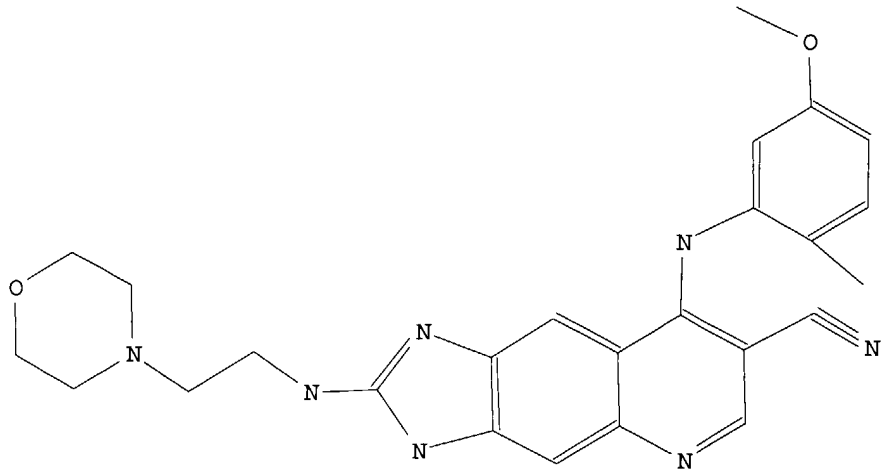
Reaction RID (.RID):	9182059.1
Reaction Classification (.CL):	Multistage
Nr. of Stages (.SNR):	2
Stage 1	
Stage 2	
Reagent (.RGT):	HgO

Reference(s):

1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 2 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN):	9304845
Chemical Name (CN):	8-(5-methoxy-2-methyl-phenylamino)-2-(2-morpholin-4-yl-ethylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN):	8-(5-methoxy-2-methyl-phenylamino)-2-(2-morpholin-4-yl-ethylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF):	C25 H27 N7 O2
Molecular Weight (MW):	457.53
Lawson Number (LN):	30824, 30356, 14902, 3018, 289
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	7857619
Tautomer ID (TAUTID):	8734922
Entry Date (DED):	2003/04/17
Update Date (DUPD):	2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	5
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

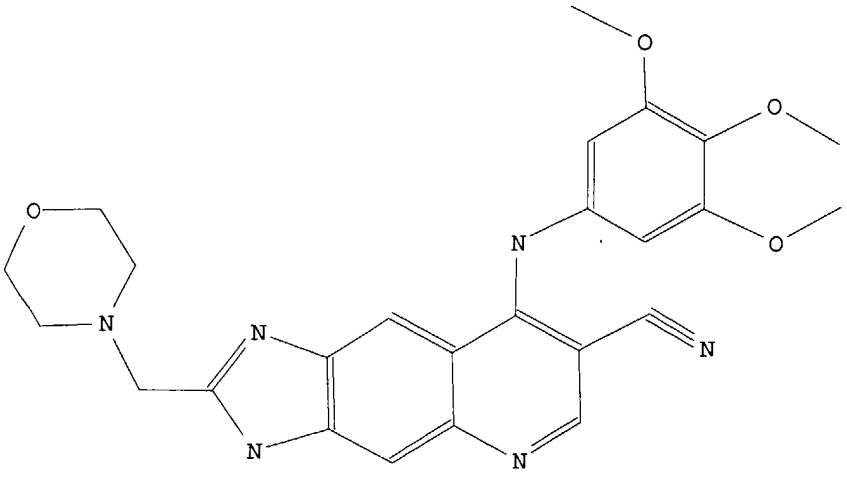
Reaction ID (.ID):	9182058
Reactant BRN (.RBRN):	9286834, 1210530
Reactant (.RCT):	6,7-diamino-4-(5-methoxy-2-methyl-phenylamino)-quinoline-3-carbonitrile, 4-(2-isothiocyanato-ethyl)-morpholine
Product BRN (.PBRN):	9304845
Product (.PRO):	8-(5-methoxy-2-methyl-phenylamino)-2-(2-morpholin-4-yl-ethylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

Reaction Details:
RX

Reaction RID (.RID): 9182058.1
Reaction Classification (.CL): Multistage
Nr. of Stages (.SNR): 2
Stage 1
Stage 2
Reagent (.RGT): HgO
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 3 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9304516
Chemical Name (CN): 2-morpholin-4-ylmethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 2-morpholin-4-ylmethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C25 H26 N6 O4
Molecular Weight (MW): 474.52
Lawson Number (LN): 30824, 30357, 15326, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7857350
Tautomer ID (TAUTID): 8733004
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Searched by Noble Jarrell

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	4
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID): 9177041
Reactant BRN (.RBRN): 9297462, 102549
Reactant (.RCT): 2-chloromethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile, morpholine
Product BRN (.PBRN): 9304516
Product (.PRO): 2-morpholin-4-ylmethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR): 1

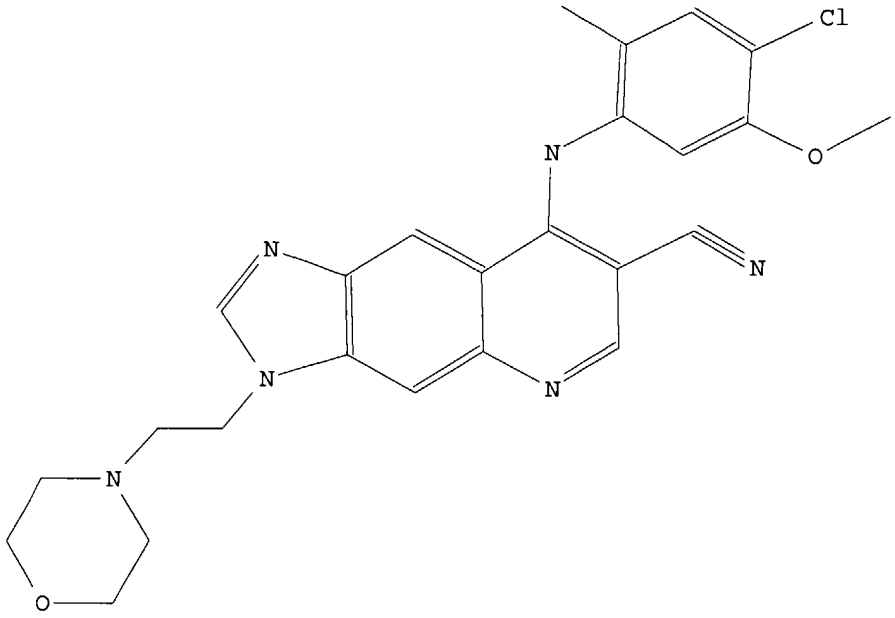
Reaction Details:
RX

Reaction RID (.RID): 9177041.1
Reaction Classification (.CL): Preparation
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 4 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9303785
Chemical Name (CN): 8-(4-chloro-5-methoxy-2-methyl-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 8-(4-chloro-5-methoxy-2-methyl-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C25 H25 Cl N6 O2
Molecular Weight (MW): 476.96
Lawson Number (LN): 30824, 30355, 14903, 3018, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7856774

Tautomer ID (TAUTID): 8737736
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
LSF	Linearized Structure Formula	1
MF	Molecular Formula	1
FW	Formular Weight	1
FBRN	Fragment BRN	2
LN	Lawson Number	5
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID):	9192198
Reactant BRN (.RBRN):	9286129, 2831008
Reactant (.RCT):	8-chloro-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 4-chloro-5-methoxy-2-methyl-aniline
Product BRN (.PBRN):	9303785
Product (.PRO):	8-(4-chloro-5-methoxy-2-methyl-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

Reaction Details:
RX

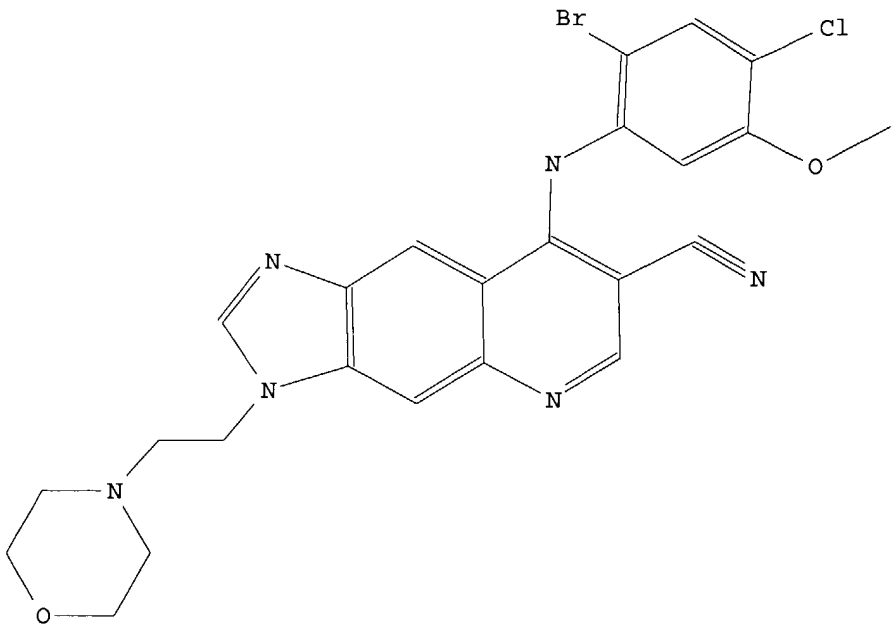
Reaction RID (.RID):	9192198.1
Reaction Classification (.CL):	Preparation
Reagent (.RGT):	pyridine hydrochloride
Solvent (.SOL):	2-ethoxy-ethanol
Other Conditions (.COND):	Heating

Reference(s):

1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 5 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN):	9303647
Chemical Name (CN):	8-(2-bromo-4-chloro-5-methoxy-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN):	8-(2-bromo-4-chloro-5-methoxy-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF):	C24 H22 Br Cl N6 O2
Molecular Weight (MW):	541.83
Lawson Number (LN):	30824, 30355, 14894, 3018, 289
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	7856662
Tautomer ID (TAUTID):	8737612
Entry Date (DED):	2003/04/17
Update Date (DUPD):	2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	5
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

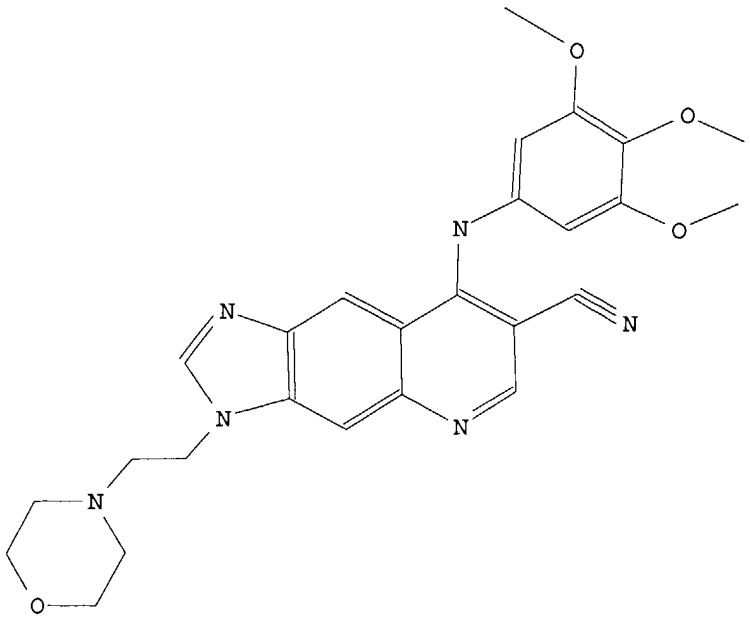
Reaction ID (.ID):	9214177
Reactant BRN (.RBRN):	9286129, 9044203
Reactant (.RCT):	8-chloro-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 2-bromo-4-chloro-5-methoxy-phenylamine
Product BRN (.PBRN):	9303647
Product (.PRO):	8-(2-bromo-4-chloro-5-methoxy-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-

g>quinoline-7-carbonitrile
No. of React. Details (.NVAR): 1

Reaction Details:
RX
Reaction RID (.RID): 9214177.1
Reaction Classification (.CL): Preparation
Reagent (.RGT): pyridine hydrochloride
Solvent (.SOL): 2-ethoxy-ethanol
Other Conditions (.COND): Heating
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 6 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9303524
Chemical Name (CN): 3-(2-morpholin-4-yl-ethyl)-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 3-(2-morpholin-4-yl-ethyl)-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C26 H28 N6 O4
Molecular Weight (MW): 488.55
Lawson Number (LN): 30824, 30355, 15326, 3018, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7856543
Tautomer ID (TAUTID): 8737585
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	5
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID): 9208412
Reactant BRN (.RBRN): 9286129, 642919
Reactant (.RCT): 8-chloro-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 3,4,5-trimethoxy-aniline
Product BRN (.PBRN): 9303524
Product (.PRO): 3-(2-morpholin-4-yl-ethyl)-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR): 1

Reaction Details:
RX

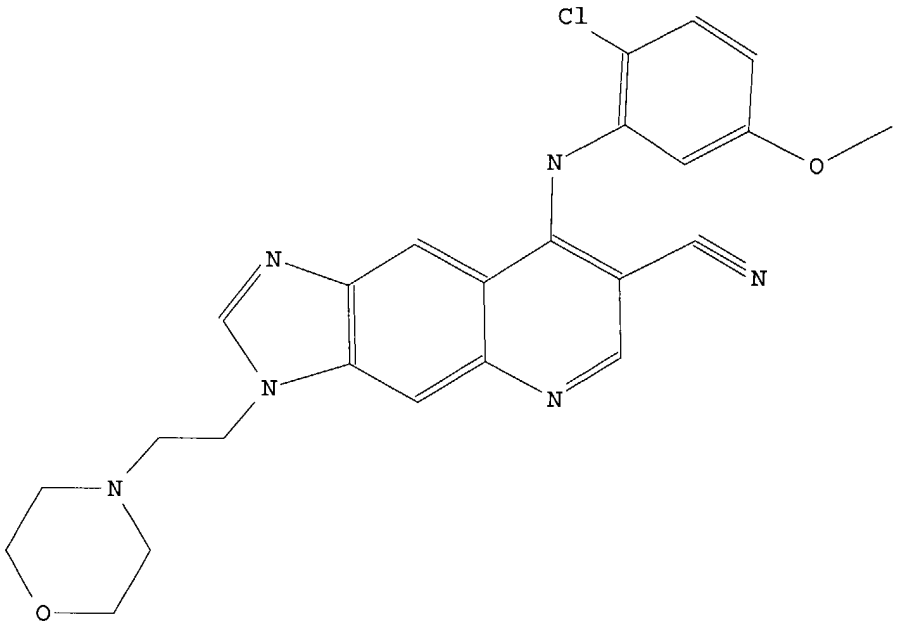
Reaction RID (.RID): 9208412.1
Reaction Classification (.CL): Preparation
Reagent (.RGT): pyridine hydrochloride
Solvent (.SOL): 2-ethoxy-ethanol
Other Conditions (.COND): Heating
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 7 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9301278
Chemical Name (CN): 8-(2-chloro-5-methoxy-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 8-(2-chloro-5-methoxy-phenylamino)-3-(2-

morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile

Molec. Formula (MF):	C24 H23 Cl N6 O2
Molecular Weight (MW):	462.94
Lawson Number (LN):	30824, 30355, 14893, 3018, 289
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	7854680
Tautomer ID (TAUTID):	8736936
Entry Date (DED):	2003/04/17
Update Date (DUPD):	2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
FBRN	Fragment BRN	2
LN	Lawson Number	5
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence

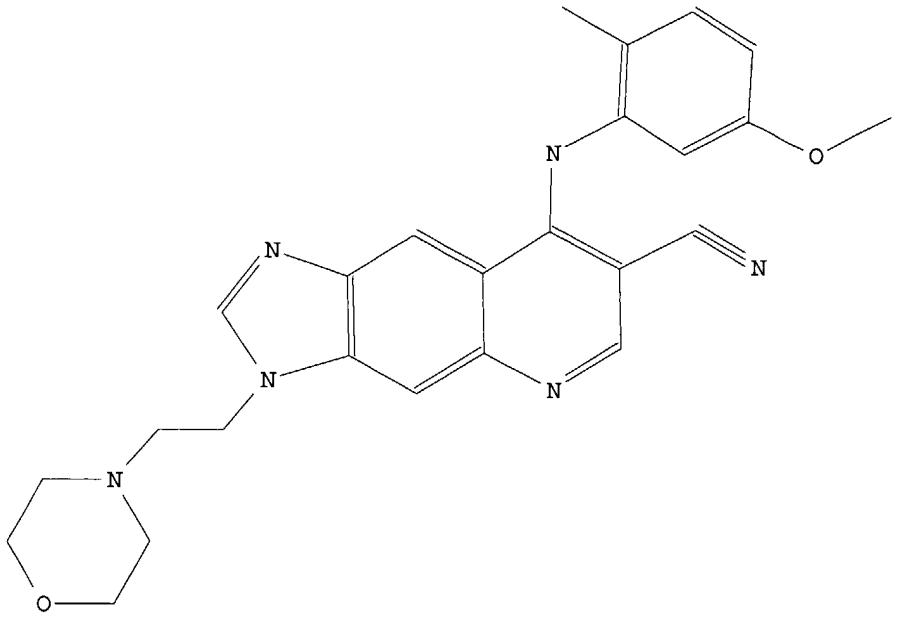
```
=====================================================
RX        Reaction Documents                        1
RXPRO     Substance is Reaction Product             1

Reaction:
RX
     Reaction ID (.ID):              9190208
     Reactant BRN (.RBRN):           9286129, 2082193
     Reactant (.RCT):                8-chloro-3-(2-morpholin-4-yl-ethyl)-3H-
                                     imidazo<4,5-g>quinoline-7-carbonitrile,
                                     2-chloro-5-methoxy-aniline
     Product BRN (.PBRN):            9301278
     Product (.PRO):                 8-(2-chloro-5-methoxy-phenylamino)-3-(2-
                                     morpholin-4-yl-ethyl)-3H-imidazo<4,5-
                                     g>quinoline-7-carbonitrile
     No. of React. Details (.NVAR):  1

Reaction Details:
RX
     Reaction RID (.RID):            9190208.1
     Reaction Classification (.CL):  Preparation
     Reagent (.RGT):                 pyridine hydrochloride
     Solvent (.SOL):                 2-ethoxy-ethanol
     Other Conditions (.COND):       Heating
     Reference(s):
     1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan;
        DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank,
        Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766;
        BABS-6374520


L17  ANSWER 8 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

     Beilstein Records (BRN):        9300518
     Chemical Name (CN):             8-(5-methoxy-2-methyl-phenylamino)-3-(2-
                                     morpholin-4-yl-ethyl)-3H-imidazo<4,5-
                                     g>quinoline-7-carbonitrile
     Autonom Name (AUN):             8-(5-methoxy-2-methyl-phenylamino)-3-(2-
                                     morpholin-4-yl-ethyl)-3H-imidazo<4,5-
                                     g>quinoline-7-carbonitrile
     Molec. Formula (MF):            C25 H26 N6 O2
     Molecular Weight (MW):          442.52
     Lawson Number (LN):             30824, 30355, 14902, 3018, 289
     Compound Type (CTYPE):          heterocyclic
     Constitution ID (CONSID):       7854011
     Tautomer ID (TAUTID):           8737502
     Entry Date (DED):               2003/04/17
     Update Date (DUPD):             2003/04/17
```



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	5
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

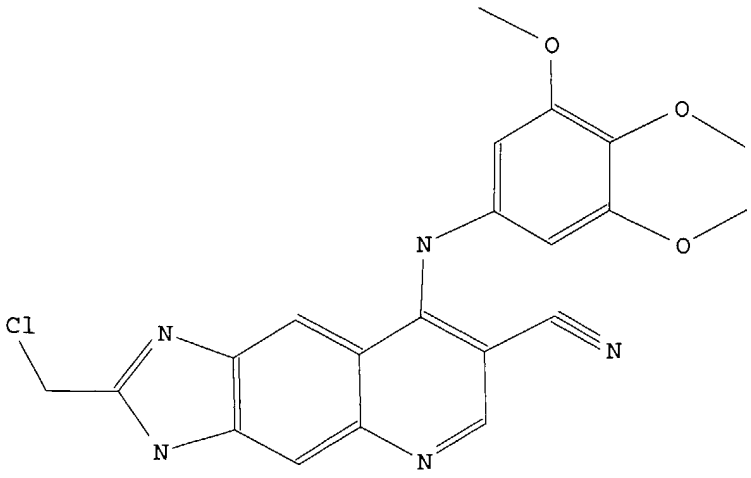
Reaction ID (.ID):	9211265
Reactant BRN (.RBRN):	9286129, 774678
Reactant (.RCT):	8-chloro-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 5-methoxy-2-methyl-aniline
Product BRN (.PBRN):	9300518
Product (.PRO):	8-(5-methoxy-2-methyl-phenylamino)-3-(2-morpholin-4-yl-ethyl)-3H-imidazo<4,5-

g>quinoline-7-carbonitrile
No. of React. Details (.NVAR): 1

Reaction Details:
RX
Reaction RID (.RID): 9211265.1
Reaction Classification (.CL): Preparation
Reagent (.RGT): pyridine hydrochloride
Solvent (.SOL): 2-ethoxy-ethanol
Other Conditions (.COND): Heating
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 9 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9297462
Chemical Name (CN): 2-chloromethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 2-chloromethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C21 H18 Cl N5 O3
Molecular Weight (MW): 423.86
Lawson Number (LN): 30357, 15326, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7851478
Tautomer ID (TAUTID): 8728619
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Code Name Occurrence

BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	2
RXREA	Substance is Reaction Reactant	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID):	9205152
Reactant BRN (.RBRN):	9294295, 605439
Reactant (.RCT):	6,7-diamino-4-(3,4,5-trimethoxy-phenylamino)-quinoline-3-carbonitrile, chloroacetyl chloride
Product BRN (.PBRN):	9297462
Product (.PRO):	2-chloromethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

Reaction Details:
RX

Reaction RID (.RID):	9205152.1
Reaction Classification (.CL):	Multistage
Nr. of Stages (.SNR):	2
Stage 1	
Reagent (.RGT):	Et2NPh
Stage 2	
Reagent (.RGT):	acetic acid
Other Conditions (.COND):	Heating

Reference(s):

1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

Reaction:
RX

Reaction ID (.ID):	9177041
Reactant BRN (.RBRN):	9297462, 102549
Reactant (.RCT):	2-chloromethyl-8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile, morpholine
Product BRN (.PBRN):	9304516
Product (.PRO):	2-morpholin-4-ylmethyl-8-(3,4,5-trimethoxy-

phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile

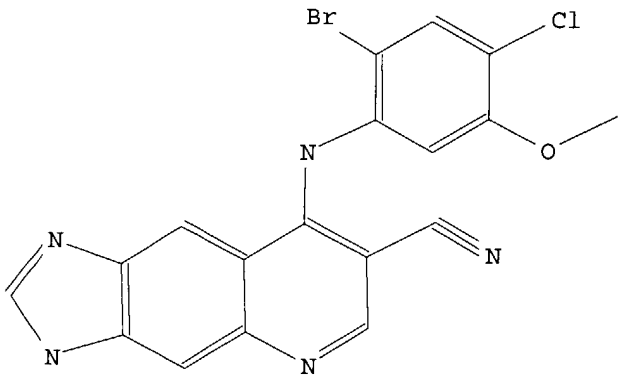
No. of React. Details (.NVAR): 1

Reaction Details:
RX

Reaction RID (.RID): 9177041.1
Reaction Classification (.CL): Preparation
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 10 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9292188
Chemical Name (CN): 8-(2-bromo-4-chloro-5-methoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 8-(2-bromo-4-chloro-5-methoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C18 H11 Br Cl N5 O
Molecular Weight (MW): 428.67
Lawson Number (LN): 30355, 14894, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7847049
Tautomer ID (TAUTID): 8725288
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1

Searched by Noble Jarrell

LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

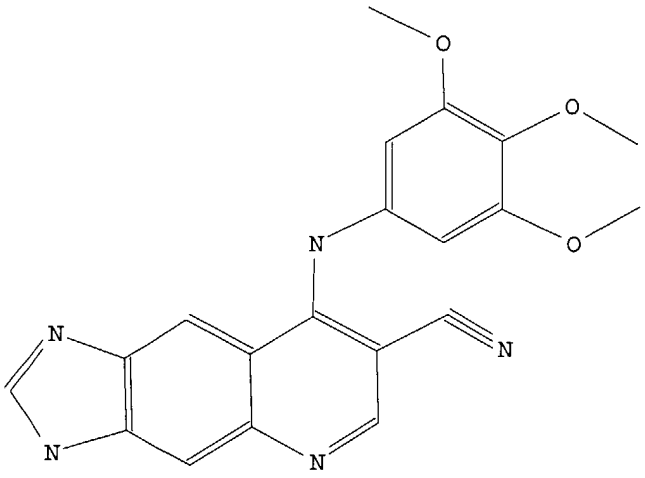
Reaction ID (.ID): 9214176
Reactant BRN (.RBRN): 9266116, 9044203
Reactant (.RCT): 8-chloro-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 2-bromo-4-chloro-5-methoxy-phenylamine
Product BRN (.PBRN): 9292188
Product (.PRO): 8-(2-bromo-4-chloro-5-methoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR): 1

Reaction Details:
RX

Reaction RID (.RID): 9214176.1
Reaction Classification (.CL): Preparation
Reagent (.RGT): pyridine hydrochloride
Solvent (.SOL): 2-ethoxy-ethanol
Other Conditions (.COND): Heating
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 11 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9291861
Chemical Name (CN): 8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C20 H17 N5 O3
Molecular Weight (MW): 375.39
Lawson Number (LN): 30355, 15326, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7846818
Tautomer ID (TAUTID): 8725471
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
NMR	Nuclear Magnetic Resonance	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID):	9208408
Reactant BRN (.RBRN):	9266116, 642919
Reactant (.RCT):	8-chloro-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 3,4,5-trimethoxy-aniline
Product BRN (.PBRN):	9291861
Product (.PRO):	8-(3,4,5-trimethoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

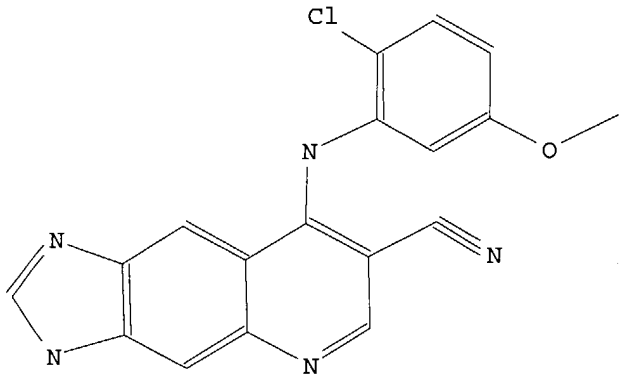
Reaction Details:
RX

Reaction RID (.RID):	9208408.1

Reaction Classification (.CL): Preparation
Reagent (.RGT): pyridine hydrochloride
Solvent (.SOL): 2-ethoxy-ethanol
Other Conditions (.COND): Heating
Reference(s):
1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 12 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN): 9286966
Chemical Name (CN): 8-(2-chloro-5-methoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN): 8-(2-chloro-5-methoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF): C18 H12 Cl N5 O
Molecular Weight (MW): 349.78
Lawson Number (LN): 30355, 14893, 289
Compound Type (CTYPE): heterocyclic
Constitution ID (CONSID): 7842596
Tautomer ID (TAUTID): 8723178
Entry Date (DED): 2003/04/17
Update Date (DUPD): 2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1

ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID):	9190207
Reactant BRN (.RBRN):	9266116, 2082193
Reactant (.RCT):	8-chloro-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 2-chloro-5-methoxy-aniline
Product BRN (.PBRN):	9286966
Product (.PRO):	8-(2-chloro-5-methoxy-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

Reaction Details:
RX

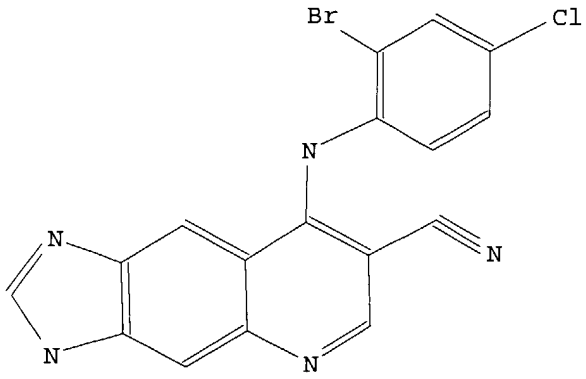
Reaction RID (.RID):	9190207.1
Reaction Classification (.CL):	Preparation
Reagent (.RGT):	pyridine hydrochloride
Solvent (.SOL):	2-ethoxy-ethanol
Other Conditions (.COND):	Heating

Reference(s):

1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

L17 ANSWER 13 OF 13 BEILSTEIN COPYRIGHT 2004 BEILSTEIN MDL on STN

Beilstein Records (BRN):	9286576
Chemical Name (CN):	8-(2-bromo-4-chloro-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Autonom Name (AUN):	8-(2-bromo-4-chloro-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
Molec. Formula (MF):	C17 H9 Br Cl N5
Molecular Weight (MW):	398.65
Lawson Number (LN):	30355, 14133
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	7842299
Tautomer ID (TAUTID):	8724399
Entry Date (DED):	2003/04/17
Update Date (DUPD):	2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
ED	Entry Date	1
UPD	Update Date	1
PHARM	Pharmacological Data	5

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Reaction:
RX

Reaction ID (.ID):	9192082
Reactant BRN (.RBRN):	9266116, 2802563
Reactant (.RCT):	8-chloro-3H-imidazo<4,5-g>quinoline-7-carbonitrile, 2-bromo-4-chloro-aniline
Product BRN (.PBRN):	9286576
Product (.PRO):	8-(2-bromo-4-chloro-phenylamino)-3H-imidazo<4,5-g>quinoline-7-carbonitrile
No. of React. Details (.NVAR):	1

Reaction Details:
RX

Reaction RID (.RID):	9192082.1
Reaction Classification (.CL):	Preparation
Reagent (.RGT):	pyridine hydrochloride
Solvent (.SOL):	2-ethoxy-ethanol
Other Conditions (.COND):	Heating
Reference(s):	

1. Berger, Dan; Dutia, Minu; Powell, Dennis; Wu, Biqi; Wissner, Allan; DeMorin, Frenel; Weber, Jennifer; Boschelli, Frank, Bioorg.Med.Chem.Lett., CODEN: BMCLE8, 12(19), <2002>, 2761 - 2766; BABS-6374520

=> b marpat
[illegible]T' ENTERED AT 10:06:50 ON 26 JUL 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

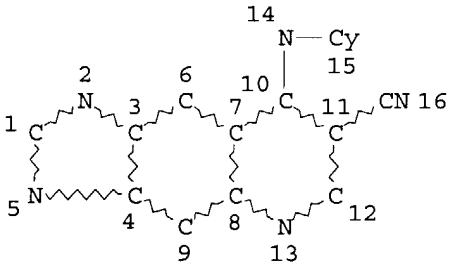
FILE CONTENT: 1988-PRESENT (VOL 141 ISS 04)(20040723/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6747069 08 JUN 2004
DE 10351214 19 MAY 2004
EP 1424340 02 JUN 2004
JP 2004161736 10 JUN 2004
WO 2004052350 24 JUN 2004

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

=> d que stat 120
L18 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT 15
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE
L20 [illegible] L18

100.0% PROCESSED 7175 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.38

=> d bib abs 120 tot

L20 ANSWER 1 OF 2 MARPAT COPYRIGHT 2004 ACS on STN
AN 136:37618 MARPAT

TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors

IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi

PA American Home Products Corporation, USA; Wyeth

SO U.S. Pat. Appl. Publ., 107 pp.
CODEN: USXXCO

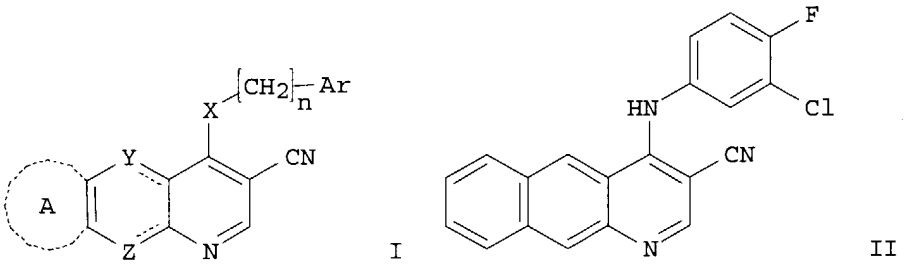
DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2001051620	A1	20011213	US 2000-751274	20001229
US 6638929	B2	20031028		
US 2004110762	A1	20040610	US 2003-618044	20030710
PRAI US 1999-240905P	19991229			
US 2000-751274	20001229			

GI



AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 .mu.M against EGF-R kinase (recombinant enzyme), was given.

L20 ANSWER 2 OF 2 MARPAT COPYRIGHT 2004 ACS on STN

AN 135:92639 MARPAT

TI Preparation of substituted aromatic tricyclic compounds containing nicotinonitrile rings as protein kinase inhibitors

IN Berger, Dan M.; Dutia, Minu D.; Demorin, Frenel F.; Boschelli, Diane H.; Powell, Dennis W.; Tsou, Hwei-ru; Wissner, Allan; Zhang, Nan; Ye, Fei; Wu, Biqi

PA American Home Products Corp., USA

SO PCT Int. Appl., 377 pp.
CODEN: PIXXD2

DT Patent

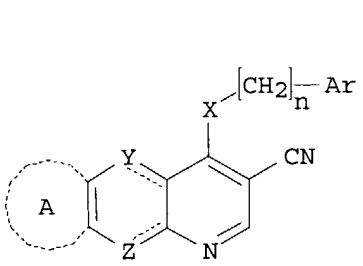
LA English

FAN.CNT 1

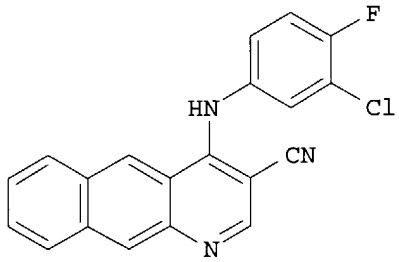
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001047892	A1	20010705	WO 2000-US35616	20001229

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

```
            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
            ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
    EP 1242382         A1   20020925       EP 2000-988437   20001229
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
    BR 2000016878      A    20021008       BR 2000-16878    20001229
    JP 2003519127      T2   20030617       JP 2001-549364   20001229
PRAI US 1999-473600    19991229
    WO 2000-US35616    20001229
GI
```



I



II

AB The title compds. I [Ar = (un)substituted cycloalkyl, pyridyl, pyrimidinyl, etc.; n = 0-1; X = NH, O, S, NR; R = alkyl; Y, Z = both carbon or N; A = (un)substituted benzo, pyrido, pyrimido, etc.] which are useful as inhibitors of protein tyrosine kinase and are antiproliferative agents, were prepared E.g., a 3-step synthesis of II which showed IC50 of 0.005 .mu.M against EGF-R kinase (recombinant enzyme), was given.

```
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> b home
FILE 'HOME' ENTERED AT 10:08:17 ON 26 JUL 2004

=>
```